

5,044,278; and in paragraph 4, claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Marcon, U.S. Patent No. 3,072,021. The rejections are respectfully traversed.

Applicants' claim 1 calls for a device providing an electrical connection between a recoiling mass of a weapon and a fixed cradle, the device comprising at least one electrical connector formed of a plug and a socket, one of said plug and socket is integral with said cradle and the other of said socket and said plug is integral with said recoiling mass, said socket and plug being disconnected during the recoil of said recoiling mass.

None of the applied references disclose such.

Humphrey describes a cammed firing pin. The firing pin is mounted in a revolver type weapon having an electrically-conductive firing pin. What the Office Action describes as a fixed cradle 18 is actually an actuator 18 that is a part of a recoil unit 16 for respective axial reciprocation (col. 3, lines 6-10) and actuator 18 slides rearwardly to an out of battery position (col. 3, lines 66-68). Thus, the actuator 18 is not fixed. Through a mechanical relationship, as the actuator 18 recoils the firing pin tip 44 is retracted (col. 3, line 65 - col. 4, line 2). Further, Applicants' claim says that the socket and plug are disconnected during recoil of the recoiling mass. However, as described in col. 4, lines 3-13 of Humphrey, it is implicit that current continues to flow into the firing pin as the sole purpose of the camming action is to make sure that the firing pin tip 44 withdraws from a normal position earlier and returns to a normal position later to decrease the opportunity for stray electric currents to discharge the firing positioned cartridge.

In Humphrey, the firing pin tip 44 makes contact with a primer 33 when in the firing position. Although the primer 33 can be said to be recessed in an aperture 32 in the base of a cartridge 30, one would not consider such a plug and socket and further there is no plug or socket integral with the cradle and the other of the socket or plug integral with the recoiling mass. The cartridge is clearly not a cradle as it is received in a chamber 26 of a cartridge drum

22. It is also not a cradle. Thus, Humphrey does not literally disclose the claimed invention and a rejection under 35 U.S.C. §102 is inappropriate. Further, for the reasons discussed Humphrey does not suggest the invention of claim 1.

As to Campbell, Campbell is even further more remote from the claimed invention than is Humphrey. Campbell discloses a cartridge 20 having a projectile or bullet 34 and a central electrode 70 that ignites an inner pocket 66 having a charge 32. The charge 32 may be a primer.

A hammer 22 engages the cartridge and has two negative contacts 104 and a positive contact 102. The negative contacts engage an annular electrode 44 that is separated from a disk 78 which is part of the central electrode 70. When a charge is applied, a spark crosses a spark gap G between the electrode 44 and the disk 78, in the inner pocket 66, to ignite either the primer or the charge thereby expelling the projectile. Thus, there is no disclosed cradle, there is no disclosed recoiling mass as nothing indicates the hammer 22 recoils, the only description of operation dealing with how the cartridge is ignited as found in col. 6, lines 42-58. Thus, Campbell does not literally disclose the claimed invention. Further, Campbell does not suggest the claimed invention. Therefore it is respectfully requested that the rejection be withdrawn.

As to the last §102 rejection over Marcon, this too is far field from Applicants' claimed invention. Marcon deals with a missile mounted to a wing pylon of an aircraft. The missile and wing pylon are connected by a rigid umbilical cord 16.

At the missile connection end of the umbilical cord 16 is a housing 32. Attached to the housing 32 is an insertion block 24. Attached to the missile 14 is a terminal block 18. The terminal block 18 on the missile 14 is attached to the insulation block 24 by shear screws 28. Contact pins 20 extend upwardly from the terminal block 18 into receptacles found in the insulation block 24. When the missile is fired, the contact pins 20 and the shear screw 38 are

sheared. Thus, after firing the missile, to rearm the pylon all that is necessary is to remove the insulation block 24 and replace it with a new block 24 prior to mounting a new missile to the pylon.

As such, there is no recoiling mass, although the pylon might be considered a fixed cradle there is no action of a plug and socket being disconnected during recoil of the recoiling mass. The only action that occurs is the alleged plug and socket are broken apart upon firing of the missile. Thus, Marcon does not literally disclose the claimed invention and the rejection under 35 U.S.C. §102 is inappropriate. Further, Marcon does not suggest the claimed invention for the reasons discussed.

In paragraph 6, on page 3 of the Office Action, claim 1 was rejected under 35 U.S.C. §103 as being unpatentable over Meyer, U.S. Patent No. 2,898,812, in view of Greenlees, U.S. Patent No. 3,094,932. The rejection is respectfully traversed.

Meyer does not disclose a plug and socket contact as admitted in the Office Action. Further, Meyer addresses a firing pin that makes contact with the primer of a round 52. As shown in Fig. 5, the primer contact extends outwardly from the base of the cartridge of round 52.

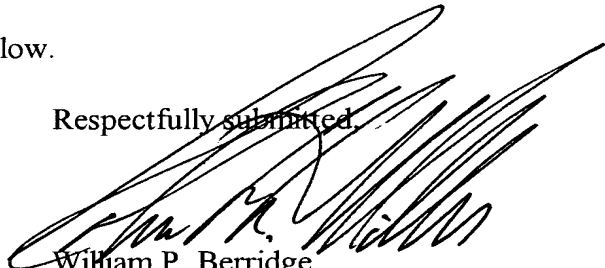
Greenlees discloses an electromagnetic radiation proof igniting device that is enclosed and it is unclear what the device is intended to ignite. However, within an integral casing is found (embodiment of Fig. 1 discussed, but Fig. 2 embodiment similar) a movable core 29 that is connected to a pin 31 having a point 32 and an insulating material 33 behind the point. The point 32 is moved forward through a metallic disk 26 to contact a contact plug 21. When a current is applied, ignitor wires 23 heat an explosive material 46 in a charge carrying chamber 22 to blow out a metallic disk 24 and ignite whatever charge to which the ignitor is attached (col. 2, lines 4-64). The overall device is controlled by two switches, a current flow switch 36 and a solenoid switch 39 in the first embodiment and by a single switch 68 in the second

embodiment, the second embodiment functioning substantially in the same manner but having a slightly different structure. In any case, it is not clear how the device of Greenlees, which requires activation of a solenoid in order to drive the pin forward for engagement, would be applied to the apparatus of Meyer which ensures current flow in a firing pin only when close to a round 52. No matter how they are combined, the utility of one of the devices would be destroyed and the combination created would be in itself inventive because of the different methods of operation. Thus, it is respectfully requested that the rejection be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-7 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



William P. Berridge
Registration No. 30,024

Robert A. Miller
Registration No. 32,771

WPB:RAM/eks

Date: February 6, 2006

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

**DEPOSIT ACCOUNT USE
AUTHORIZATION**

Please grant any extension
necessary for entry;

Charge any fee due to our
Deposit Account No. 15-0461